



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending December 6, 2014 - Week 49

All data presented in this report are provisional and may change as additional reports are received



Quick Stats

Percent of outpatient visits for ILI ¹	0.32 % (baseline 1.7%)
Percent of influenza rapid test positive	17.1% (160/935)
Percent of RSV rapid tests positive	9.7% (13/134)
Percent school absence due to illness ²	2.62%
Number of schools with ≥10% absence due to illness	2
Influenza-associated hospitalizations ³	39/4,699 inpatients surveyed
Influenza-associated pediatric mortality	0

¹ ILI: Influenza-like Illness is defined as a fever of ≥100° F as well as cough and/or sore throat.

² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools

³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals

Iowa Influenza Geographic Spread²

No Activity
Sporadic
Local
Regional
Widespread

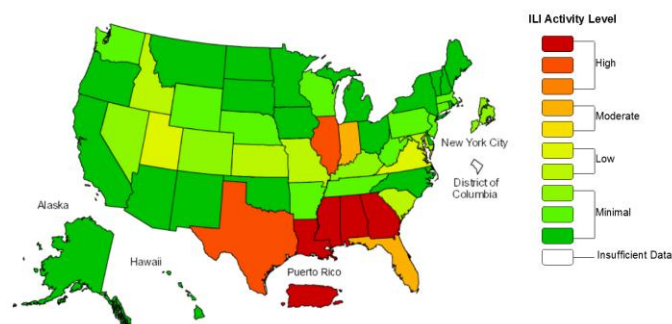
²This is based on CDC's activity estimates definition
www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

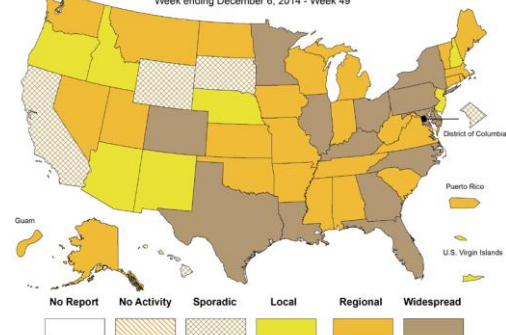
Influenza activity in Iowa has increased from local to regional. Three strains of flu are already circulating in Iowa – H1N1 (2009 pandemic strain), H3N2 (regular seasonal flu strain), and Influenza B (both Victoria and Yamagata lineage). Nationally, CDC stated that about half of the A(H3N2) strains tested so far this year have “drifted” and vaccine efficacy for these drifted strains is unknown, but some efficacy is expected. No test results are available yet to determine if the drifted strain is in Iowa. For this reporting week, the State Hygienic Laboratory confirmed 17 flu A (H3N2), two flu A (2009 H1N1), one flu B and 14 flu A (pending subtype) cases. IDPH investigated three influenza long-term care outbreak and two schools reported 10 percent or greater absenteeism due to illness. The proportion of outpatient visits due to influenza-like illness (ILI) decreased from previous week to 0.32 percent, which is well below the regional baseline. Thirty-nine influenza-associated hospitalizations were reported from sentinel hospitals. In addition, three cases of adenovirus, eight cases of parainfluenza virus type 2, one case of parainfluenza virus type 3, one case of RSV, and 33 cases of rhinovirus/enterovirus were reported to IDPH.

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2014-15 Influenza Season Week 49 ending Dec 06, 2014



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending December 6, 2014 - Week 49



Synopsis: During week 49 (November 30-December 6, 2014), influenza activity continued to increase in the United States.

Viral Surveillance: Of 16,093 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 49, 3,415 (21.2%) were positive for influenza.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.

Influenza-associated Pediatric Deaths: Two influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate for the season of 3.8 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.5%, above the national baseline of 2.0%. Eight of 10 regions reported ILI at or above region-specific baseline levels. Puerto Rico and six states experienced high ILI activity; two states experienced moderate ILI activity; seven states experienced low ILI activity; New York City and 35 states experienced minimal ILI activity; and the District of Columbia had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in 14 states was reported as widespread; Guam, Puerto Rico and 25 states reported regional activity; the U.S. Virgin Islands and seven states reported local activity; and the District of Columbia and four states reported sporadic activity.

Detailed information can be found online at www.cdc.gov/flu/weekly/

International activity summary - (WHO):

Globally, influenza activity remained low, with the exception of some Pacific Islands. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

Laboratory surveillance program:

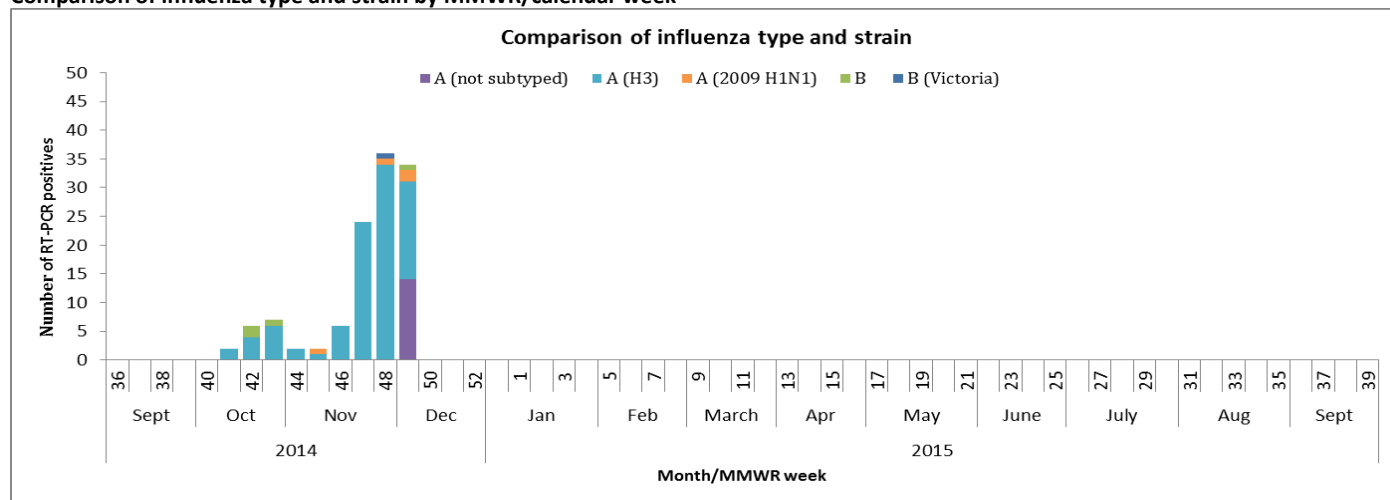
The State Hygienic Laboratory (SHL) is the primary lab for influenza testing and reporting in Iowa. SHL reports the number of tests performed and the type and strain of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs for the number of rapid-antigen tests performed and number positive weekly. This report also includes the positive non-influenza virus tests reported from SHL, the Dunes Medical Laboratories at Mercy Medical Center in Sioux City, and Iowa Methodist Medical Center in Des Moines.

Table 1: Influenza viruses detected by SHL by age group

Age Group	CURRENT WEEK							YEAR TO DATE (9/1/14 – PRESENT WEEK)						
	Flu A			Flu B			Neg	Flu A			Flu B			Neg
	A (2009 H1N1)	A (H3)	Subtype Pending	Victoria	Yamagata	Lineage Pending		A (2009 H1N1)	A (H3)	Subtype Pending	Victoria	Yamagata	Lineage Pending	
0-4	1(50%)	3(18%)	1(7%)	0(0%)	0(0%)	1(100%)	2(14%)	2(50%)	8(6%)	1(6%)	0(0%)	0(0%)	0(0%)	25(12%)
5-17	0(0%)	1(6%)	5(36%)	0(0%)	0(0%)	0(0%)	2(14%)	1(25%)	23(24%)	8(44%)	0(0%)	0(0%)	0(0%)	30(14%)
18-24	0(0%)	3(18%)	1(7%)	0(0%)	0(0%)	0(0%)	6(43%)	0(0%)	15(16%)	1(6%)	0(0%)	0(0%)	0(0%)	68(32%)
25-49	1(50%)	5(29%)	2(14%)	0(0%)	0(0%)	0(0%)	0(0%)	1(25%)	21(22%)	2(11%)	1(100%)	0(0%)	0(0%)	34(16%)
50-64	0(0%)	1(6%)	1(7%)	0(0%)	0(0%)	0(0%)	3(21%)	0(0%)	8(6%)	1(6%)	0(0%)	0(0%)	3(100%)	26(12%)
>64	0(0%)	4(24%)	4(29%)	0(0%)	0(0%)	0(0%)	1(7%)	0(0%)	19(20%)	5(28%)	0(0%)	0(0%)	0(0%)	30(14%)
Total	2	17	14	0	0	1	14	4	94	18	1	0	3	213

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included
*Two influenza B Yamagata lineage was detected at CDC

Comparison of influenza type and strain by MMWR/calendar week



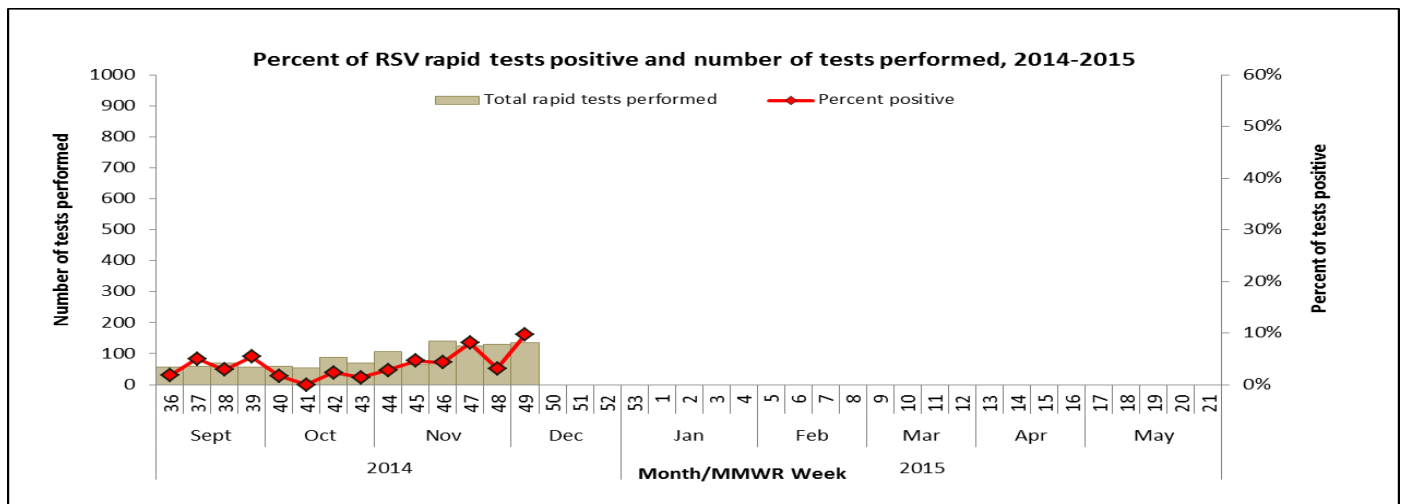
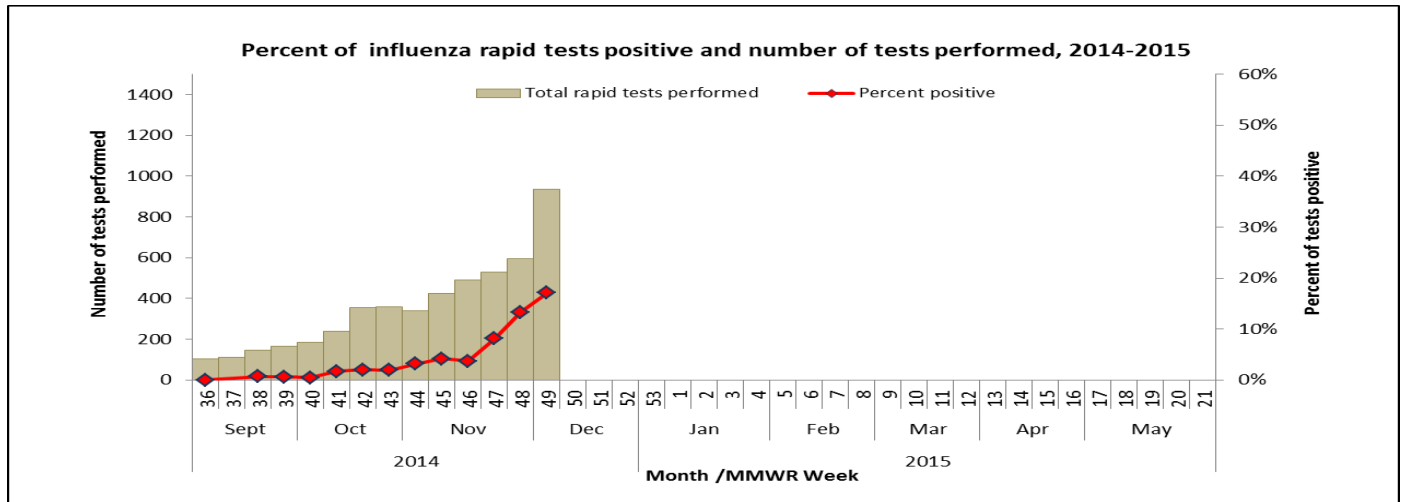
Rapid influenza and RSV test surveillance:

The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory surveillance sites throughout the state. This table does not provide case counts.

Table 2: Percent of influenza rapid tests positive and number of tests performed by region for the present week

REGION*	RAPID ANTIGEN INFLUENZA TESTS					RAPID ANTIGEN RSV TESTS		
	Tested	Flu A	Flu B	Undefined	% Positive	Tested	Positive	% Positive
Region 1	150	31	1	0	21.3	27	2	7.4
Region 2	26	4	0	0	15.4	4	1	25.0
Region 3	182	29	0	0	15.9	26	4	15.4
Region 4	84	6	1	0	8.3	13	2	15.4
Region 5	72	12	0	0	16.7	12	0	0.0
Region 6	421	67	9	0	18.1	52	4	7.7
Total	935	149	11	0	17.1	134	13	9.7

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



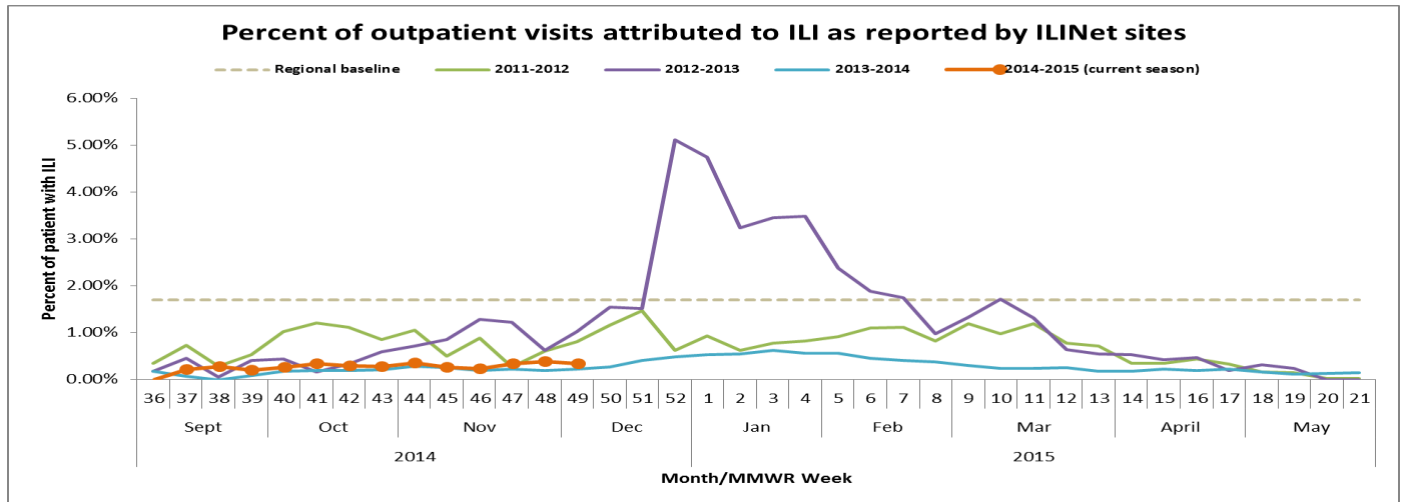
Non-influenza respiratory virus:

Table 3: Number of positive results for non-influenza respiratory virus isolated by SHL, Mercy Dunes in Sioux City and Iowa Methodist Medical Center		
Viruses	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Adenovirus	3	80
Parainfluenza Virus Type 1	0	1
Parainfluenza Virus Type 2	8	65
Parainfluenza Virus Type 3	1	13
Parainfluenza Virus Type 4	0	7
Rhinovirus/Enterovirus	33	440
Respiratory syncytial virus (RSV)	1	6
Human metapneumovirus (hMPV)	0	3
Total	46	615

Outpatient health care provider surveillance program (ILINet):

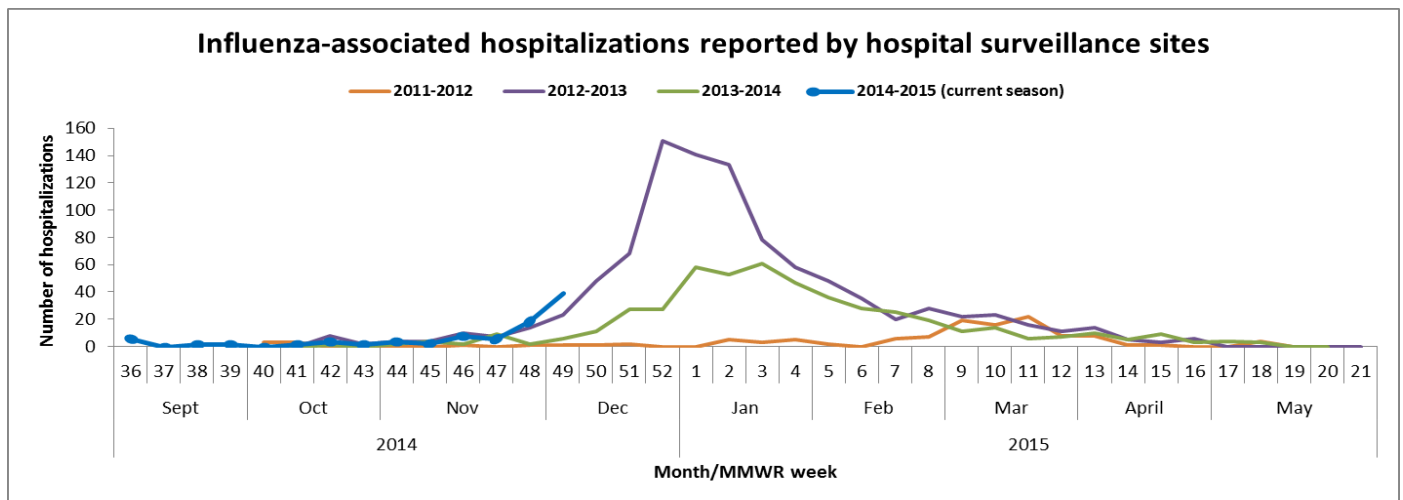
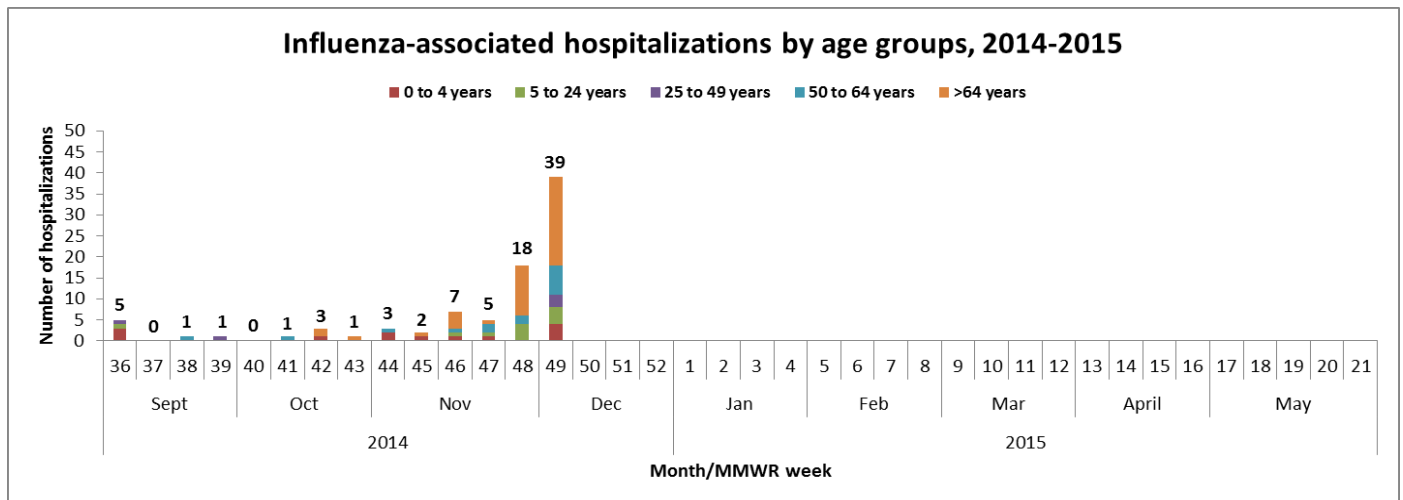
Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers interested in joining this surveillance program should contact Kemi Oni at 515-725-2136 or oluwakemi.oni@idph.iowa.gov for more information.

Table 4: Outpatient visits for influenza-like illness (ILI) – past 3 weeks							
Week	%ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64
Week 47, ending Nov 22	0.33	109	25	63	14	5	2
Week 48, ending Nov 29	0.38	92	19	54	16	3	0
Week 49, ending Dec 06	0.32	113	20	55	23	13	2



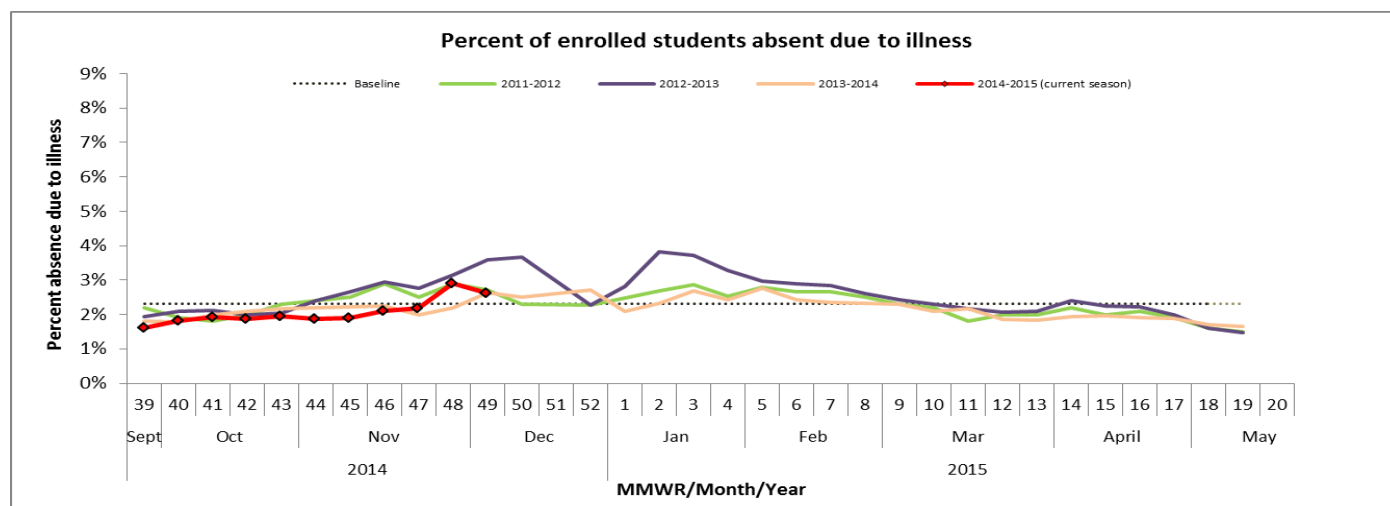
Influenza-associated hospitalizations:

Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.



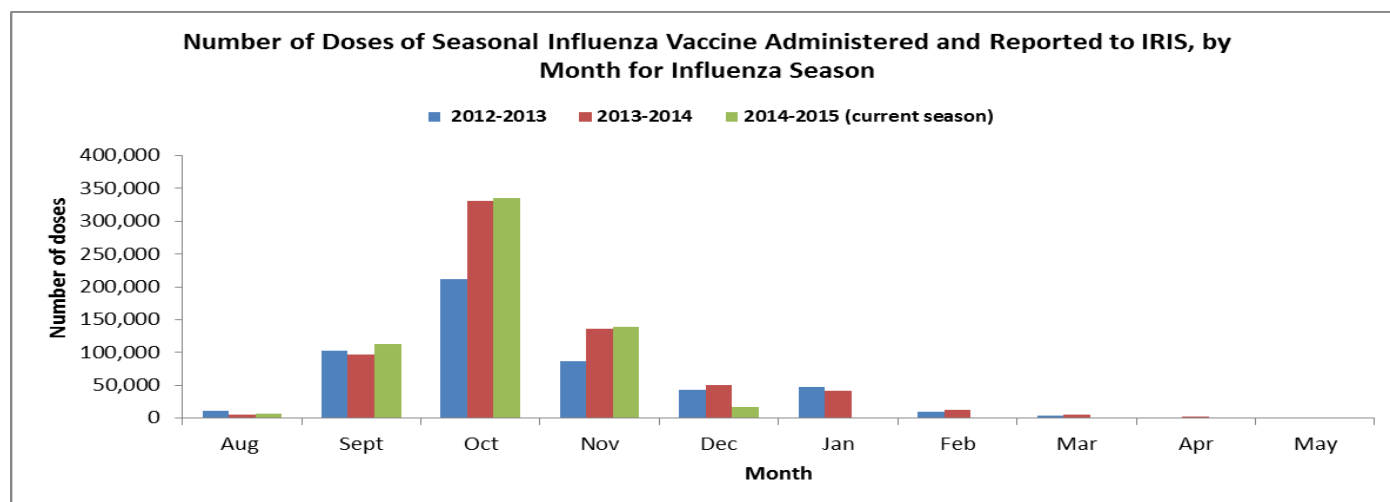
School surveillance program:

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



Seasonal influenza vaccination:

Seasonal influenza vaccination data in Iowa is based on doses reported to the Iowa Immunization Registry Information System (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunization for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state of Iowa. For more information on the immunization data, contact Kim Tichy, IRIS coordinator at 515-281-4288 or kimberly.tichy@idph.iowa.gov



Note: The data for the 2014-2015 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. The current season's data will be adjusted as additional data is received.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=Flu>

CDC vaccine information: <http://www.cdc.gov/flu/fqa/flu-vaccine-types.htm>

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: <http://www.idph.state.il.us/flu/surveillance.htm>

Minnesota: <http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html>

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/communicable/influenza/surveillance.htm

Google Flu Trends: <http://www.google.org/flutrends/us/#US-IA>